

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Anthony M. Eaton et al. Examiner: Vivian . Chang

Serial No.: 09/492,913

Group Art Unit: 2615

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Docket: 899.011US1

For: HEARING AID SYSTEMS

APPEAL BRIEF UNDER 37 CFR § 41.37

Mail Stop Appeal Brief- Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The Appeal Brief is presented in support of the Notice of Appeal to the Board of Patent Appeals and Interferences, filed on October 2, 2006, from the Final Rejection of claims 1-5, 15-72 and 93-95 of the above-identified application, as set forth in the Final Office Action mailed on June 7, 2006.

The Commissioner of Patents and Trademarks is hereby authorized to charge Deposit Account No. 19-0743 in the amount of \$500.00 which represents the requisite fee set forth in 37 C.F.R. § 41.20(b)(2). The Appellants respectfully request consideration and reversal of the Examiner's rejections of pending claims.

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

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1. REAL PARTY IN INTEREST

The real party in interest of the above-captioned patent application is the assignee, STARKEY LABORATORIES, INC.

2. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to Appellant that will have a bearing on the Board's decision in the present appeal.

3. STATUS OF THE CLAIMS

Claims 1-95 remain pending, and the status of these pending claims are provided below:

Claims 1-5. (Rejected)

Claims 6-14. (Withdrawn)

Claims 15-72. (Rejected)

Claims 73-92. (Withdrawn)

Claims 93-95. (Rejected).

Claims 1-5, 15-72 and 93-95 stand rejected, and are the subject of the present Appeal.

4. STATUS OF AMENDMENTS

No amendments have been made subsequent to the Final Office Action dated June 2, 2006.

5. SUMMARY OF CLAIMED SUBJECT MATTER

Some aspects include, but are not limited to, methods and systems for programming software in hearing aids.

In the method of independent claim 1, a mobile wireless communication protocol is used to communicate between a mobile device, such as 106 as illustrated in FIG. 1 or 606 as illustrated in FIG. 6, and a programming fitting server, such as 116 as illustrated in FIG. 1 or 616 as illustrated in FIG. 6 (see e.g. page 8, lines 8-17). Further, using the programming fitting server and the mobile device, software is programmed in a hearing aid, such as 102₀ as illustrated in FIG. 1 or 602_{B0} as illustrated in FIG. 6 (see e.g. page 7, lines 23-28, page 9, lines 23-29 and page 12, line 14 – page 13, line 5).

In the method of independent claim 4, a hearing aid system, such as 102 as illustrated in FIG. 1 or 602_B as illustrated in FIG. 6, is programmed through a mobile device, such as 106 as illustrated in FIG. 1 or 606 as illustrated in FIG. 6, using at least one mobile wireless communication protocol, such as 104 as illustrated in FIG. 1 (see e.g. page 2, lines 13-15, page 6, line 26 – page 7, line 7 and page 9, lines 23-29). In programming the hearing aid system, a distributed application is received in the mobile device from a programming fitting server, such as 116 as illustrated in FIG. 1 or 616 as illustrated in FIG. 6, through at least one long-range network using the at least one mobile wireless communication protocol (see e.g. page 9, lines 1-18). The distributed application is used to program a hearing aid, such as 102₀ as illustrated in FIG. 1 or 602_{B0} as illustrated in FIG. 6, in the hearing aid system (see e.g. page 2, lines 13-15 and page 9, lines 12-29).

The system of independent claim 15 comprises a hearing aid system, such as 102 as illustrated in FIG. 1 or 602_B as illustrated in FIG. 6, that has a hearing aid, such as 102₀ as illustrated in FIG. 1 or 602_{B0} as illustrated in FIG. 6 (see e.g. page 6, lines 7-8). The system of claim 15 further comprises a programming fitting server, such as 116 as illustrated in FIG. 1 or 616 as illustrated in FIG. 6, and a mobile device, such as 106 as illustrated in FIG. 1 or 606 as illustrated in FIG. 6 (see e.g. page 7, lines 14-16, page 8, lines 27-29, page 12, lines 10-13 and page 12, lines 21-24). The mobile device is adapted to use a mobile wireless communication

protocol to communicate with the programming fitting server and to program software in the hearing aid (see e.g. page 7, lines 23-28, page 8, lines 8-17, page 9, lines 23-29 and page 12, line 14 – page 13, line 5).

The system of independent claim 36 comprises a hearing aid system, such as 102 as illustrated in FIG. 1 or 602_B as illustrated in FIG. 6, that has a hearing aid, such as 102₀ as illustrated in FIG. 1 or 602_{B0} as illustrated in FIG. 6 (see e.g. page 6, lines 7-8). The system of claim 36 further comprises a distributed application (see e.g. page 9, lines 1-18), and a mobile device, such as 106 as illustrated in FIG. 1 or 606 as illustrated in FIG. 6, that is adapted to program the hearing aid. The mobile device is adapted to use a mobile wireless communication protocol to receive the distributed application from a computer, such as 116 as illustrated in FIG. 1 or 616 as illustrated in FIG. 6, from a long-range network and to use the distributed application to program the hearing aid (see e.g. page 7, lines 23-28, page 8, lines 8-17, page 9, lines 23-29 and page 12, line 14 – page 13, line 5).

The system of independent claim 47 comprises a hearing aid system, such as 102 as illustrated in FIG. 1, 602_B as illustrated in FIG. 6 or 1102_A as illustrated in FIG. 11, that has a hearing aid, such as 102₀ as illustrated in FIG. 1, 602_{B0} as illustrated in FIG. 6 or 1102_{A0} as illustrated in FIG. 11 (see e.g. page 16, lines 17-19 and page 17, lines 7-8). The system of claim 47 further comprises a terminal, such as 1106 as illustrated in FIG. 11 (see e.g. page 16, line 20). The terminal is adapted to program software in the hearing aid (see e.g. page 17, lines 7-11) and to use at least one wireless communication protocol to communicate with a programming fitting server, such as 116 as illustrated in FIG. 1, 616 as illustrated in FIG. 6 or 1116 as illustrated in FIG. 11, to program the software (see e.g. page 17, line 19 – page 18, line 10).

The system of independent claim 66 comprises a hearing aid system, such as 102 as illustrated in FIG. 1, 602_B as illustrated in FIG. 6 or 1102_A as illustrated in FIG. 11, that has a hearing aid, such as 102₀ as illustrated in FIG. 1, 602_{B0} as illustrated in FIG. 6 or 1102_{A0} as illustrated in FIG. 11 (see e.g. page 16, lines 17-19 and page 17, lines 7-8). The system of claim 66 further comprises a programming fitting server, such as 116 as illustrated in FIG. 1, 616 as illustrated in FIG. 6 or 1116 as illustrated in FIG. 11, that is adapted to store a distributed application (see e.g. page 9, lines 5-6 or page 17, lines 27-29), and a terminal, such as 1106 as illustrated in FIG. 11 (see e.g. page 16, line 20). The terminal is adapted to program software in

the hearing aid (see e.g. page 17, lines 7-11) and to communicate using a wireless communication protocol to receive the distributed application from the server from a long-range network, such as 1110 as illustrated in FIG. 11 (see e.g. page 17, line 19 – page 18, line 2). The mobile device is adapted to use the distributed application to interact with the hearing aid (see e.g. page 18, lines 1-10).

This summary does not provide an exhaustive or exclusive view of the present subject matter. The scope of the present subject matter is provided by the claims and their legal equivalence.)

6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1-5, 66 and 68-69 were properly rejected under 35 USC § 103(a) as being unpatentable over Hagen et al. (US 6,424,722) in view of Knappe et al. (US 6,061,431).

Whether claims 15-21, 24-26, 30, 32-33, 36, 47-53, 56-58, 64-65 and 94 were properly rejected under 35 USC § 103(a) as being unpatentable over Hagen et al. (US 6,424,722) in view of Anderson (US 5,721,783).

Whether claims 22-23 and 54-55 were properly rejected under 35 USC § 103(a) as being unpatentable over Hagen et al. (US 6,424,722) as modified by Anderson (US 5,721,783) as applied to claims 15 and 47 above, and further in view of Shennib (US 5,197,332).

Whether claims 27-29, 31-32, 34-35 and 59-63 were properly rejected under 35 USC § 103(a) as being unpatentable over Hagen et al. (US 6,424,722) as modified by Anderson (US 5,721,783) as applied to claims 15 and 47 above, and further in view of Leppisaari et al. (US 6,717,925).

Whether claims 37-40 were properly rejected under 35 USC § 103(a) as being unpatentable over Hagen et al. (US 6,424,722) as modified by Anderson (US 5,721,783) as applied to claim 36 above, and further in view of Szymansky (US 6,557,029).

Whether claims 41 and 71 were properly rejected under 35 USC § 103(a) as being unpatentable over Hagen et al. (US 6,424,722) as modified by Anderson (US 5,721,783) as applied to claims 15-16 and 47-48 above, and further in view of Knappe et al. (US 6,061,431).

Whether claims 43-46 were properly rejected under 35 USC § 103(a) as being unpatentable over Hagen et al. (US 6,424,722) as modified by Anderson (US 5,721,783) as applied to claims 15 and 24 above, and further in view of Fazio (US 6,590,986).

Whether claims 42 and 72 were properly rejected under 35 USC § 103(a) as being unpatentable over Hagen et al. (US 6,424,722) and Anderson (US 5,721,783) as modified by Leppisaari et al. (US 6,717,925) as applied to claims 15 and 31 above, and further in view of Peters (US 6,601,093).

Whether claims 67 and 70 were properly rejected under 35 USC § 103(a) as being unpatentable over Hagen et al. (US 6,424,722) as modified by Knappe et al. (US 6,061,431) as applied to claim 66 above, and further in view of Peters (US 6,601,093).

Whether claims 93 and 95 were properly rejected under 35 USC § 103(a) as being unpatentable over Hagen et al. (US 6,424,722) as modified by Anderson (US 5,721,783) as applied to claim 36 above, and further in view of Peters (US 6,601,093).

7. ARGUMENT

A) The Applicable Law under 35 U.S.C. §103(a)

MPEP 2143 identifies the requirement for a *prima facie* case of obviousness: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; (2) there must be a reasonable expectation of success; and (3) the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP 2143.03 states: "To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)."

According to MPEP 706.02(j), the following should be set forth in a §103 rejection: (A) the relevant teachings of the prior art relied upon, preferably with reference to the relevant column or page number(s) and line number(s) where appropriate; (B) the difference or differences in the claim over the applied reference(s); (C) the proposed modification of the applied reference(s) necessary to arrive at the claimed subject matter; and (D) an explanation why one of ordinary skill in the art at the time the invention was made would have been motivated to make the proposed modification. Additionally, this section states that it is important for an examiner to properly communicate the basis for a rejection so that the issues can be identified early and the applicant can be given fair opportunity to reply. This is in agreement with 37 CFR §1.104. "The reasons for any adverse action or any objection or requirement will be stated in an Office action and such information or references will be given as may be useful in aiding the applicant . . . to judge the propriety of continuing the prosecution." 37 CFR §1.104(a)(2). "In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be

designated as nearly as practicable. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified.” 37 CFR §1.104(c)(2).

“The factual inquiry whether to combine references must be thorough and searching. It must be based on objective evidence of record. This precedent has been reinforced in myriad decisions and cannot be dispensed with.” *In re Sang-Su Lee*, 277 F.3d 1338, 1343 (Fed. Cir. 2002). “[The] factual question of motivation to combine is material to patentability, and could not be resolved on subjective belief and unknown authority.” *Lee*, at 1343-44. “The board cannot rely on conclusory statement when dealing with particular combinations of prior art and specific claims, but must set for the rationale on which it relies.” *Lee*, at 1343.

As identified above, all claim limitations must be taught or suggested. MPEP 2144.03 states, with respect to rejections taking official notice of facts not in the record, “such rejections should be judiciously applied.” Section A of this MPEP section states: “It would not be appropriate for the examiner to take official notice of facts without citing a prior art reference where the facts asserted to be well known are not capable of instant and unquestionable demonstration as being well-known.” Section B of this MPEP section requires that, if official notice is taken of a fact, unsupported by documentary evidence, the technical line of reasoning underlying a decision to take such notice must be clear and unmistakable.

B) Discussion of the rejection of claims 1-5, 66 and 68-69 under 35 U.S.C. § 103(a) as being unpatentable over Hagen et al. (U.S. Patent No. 6,424,722) in view of Knappe et al. (U.S. Patent No. 6,061,431).

Claims 1-5, 66 and 68-69 were rejected under 35 USC § 103(a) as being unpatentable over Hagen et al. (US 6,424,722) in view of Knappe et al. (US 6,061,431). This rejection was timely traversed.

B)(1) Independent Claim 1

(a) There is no teaching or motivation to combine Hagen et al. and Knappe et al..

Appellant respectfully asserts that the rejection fails to provide a proper motivation to combine Hagen et al. and Knappe et al.. The rejection states: “Hagen does not teach that the communication between the mobile device and the programming fitting server uses a mobile wireless communication protocol.” (Final Office Action dated June 2, 2006, at page 3 lines 1-2). The rejection further states: “Knappe teaches . . . communication between a mobile device (cellular telephone, col. 5, lines 6-17) and a programming fitting server (server hosting database 24, col. 2 line 60-col. 3, line 20) uses a mobile wireless communication protocol (the compensated audio signal is forwarded to a cellular telephone by a mobile wireless communication protocol).” (Final Office action dated June 2, 2006, at page 3 lines 3-8).

The Office reasons that a motivation to combine can be seen in the desire to enhance programming by customization based on attributes stored in an attribute database. (Final Office Action dated June 2, 2006, at page 3 lines 14-15). This motivation asserted by the Office is improper for at least the following reasons.

(i) The stated motivation to combine is not related to the recited subject matter.

Knappe et al. discuss forwarding the compensated audio signal to a cellular phone. The desire to enhance programming by customization based on attributes stored in an attribute database is not supported by a reference nor is it satisfied by or even related to forwarding a compensated audio signal to a cellular phone. The forwarding of an already compensated call to a cellular telephone by using a usual wireless link between a base station and the cellular

telephone is unrelated to the downloading of compensation attributes to compensate the audio signal.

(ii) The attribute dataset of Knappe et al. is not analogous to the multiprogram unit of Hagen et al.

Knappe et al. relate to a hearing loss compensation system. In order to provide audio signal compensation for a particular user 14 of a telephone handset 16, based on the telephone number 36 of the telephone 16 compensation attributes 38 are downloaded from an attribute database 24 to a signal processing system 20 (see e.g. FIGS. 1 and 2 and col. 1, line 19 – col. 2, line 19). The telephone 16 and the signal processing system 20 are both coupled to an access device 18, such as a telephone switch, *i.e.* to a stationary intermediate network component. The signal processor 20 then compensates audio signals according to the downloaded compensation attributes 38.

Knappe et al. do not show a programming fitting server used to program a hearing aid. Further, Knappe et al. do not include a teaching or suggestion that the communication links between the attributes database 24, the access device 18, the signal processing system 20 and/or the telephone 16 should be wireless.

In combining Knappe et al. with Hagen et al., the Office erroneously took the isolated feature of a communication link between a cellular telephone and a base station in Knappe et al. out of context. As shown in FIG. 9 and described in e.g. col. 14, lines 3-5 of Hagen et al., the multiprogram unit 320 is temporarily connected to the PCMCIA card 300 via a cable 314, wherein the multiprogram unit 320 is located in the immediate vicinity of the PCMCIA card 300. The wired communication link between the multiprogram unit 320 and the PCMCIA card 300 provides short-range communication (e.g. the order of a few meters). By contrast, communication between a cellular telephone and a base station in a cellular communication system occurs over significantly larger distances. A skilled person would not have contemplated or been motivated to replace the cable 314 of Hagen et al., adapted to connect a hand-held or laptop computer 236 (see e.g. col. 13, lines 16-19) to a multiprogram unit 320 locally positioned with respect to the computer 236, with a communication link adapted for long range

communication between a fixed base station and a moving cellular telephone. The objectives and characteristics of these communication links are very different from each other.

(iii) The recited motivation is conclusory.

Objective evidence was not provided to identify a motivation to combine a method for hearing loss compensation in telephony systems based on telephone numbers, and a programmable system for programming hearing aids.

(b) The combination of Hagen et al. and Knappe et al. does not show or suggest all of the claim language of claim 1.

The combination of Hagen et al. and Knappe et al. does not illustrate a method that includes using a mobile wireless communication protocol to communicate between a mobile device and a programming fitting server, as recited in claim 1.

The wireless communication link in Hagen et al. is between a portable multiprogram unit 320 and hearing aids 344, 348 (see FIG. 9). The wireless link of Hagen et al. is identified as infrared, radio frequency, or ultrasound (col. 14 at lines 27-32). The portable multiprogram unit 320 is connected to a host 236 via a cable 314 and a PCMCIA card 300. This does not show a method that includes using a mobile wireless communication protocol to communicate between a mobile device and a programming fitting server.

As discussed in the passage cited by the Examiner, the wireless communication link in Knappe et al. refers to forwarding a telephone call from a land line telephone to a cellular telephone (col. 5, lines 6-17). As nothing in Knappe et al. indicates to the contrary, this communication link is established in the usual manner between a cellular telephone and a base station of the respective cellular mobile communication system in which the cellular telephone is operating. Knappe et al. do not show a programming fitting server, nor does it show a method that uses a mobile wireless communication protocol to communicate between a mobile device and a programming fitting server.

On page 19, the final rejection mischaracterizes the server hosting database 24 as a programming fitting server. Knappe et al. indicate that the attribute database 24 stores hearing compensation attributes that are downloaded to signal processing system 20 and/or 26 when the

sending and/or destination number match one of the numbers stored in the attribute database (column 3 lines 6-19). The server hosting database 24 of Knappe et al. do not function as a programming fitting server of a hearing aid device. For this reason alone, the rejection is improper.

Therefore, a combination of Hagen et al. and Knappe et al. do not teach or suggest the feature of wireless communication between a programming fitting server and a mobile device. Further, it would be improper to take official notice of the missing feature as it is not supported by a clear and unmistakable technical line of reasoning. Thus, a *prima facie* case of obviousness has not been established.

(c) Dependent Claims

Claims 2-3 depend on claim 1, and are believed to be condition for allowance at least for the reasons provided with respect to independent claim 1.

B)(2) Independent Claim 4

(a) There is no teaching or motivation to combine the references.

In combining Knappe et al. with Hagen et al., the office erroneously took the isolated feature of a communication link between a cellular telephone and a base station in Knappe et al. out of context. Specific arguments in support of Appellant's position that the combination of references is improper were provided with respect to claim 1. In the interest of brevity, the reasons provided with respect to claim 1 are incorporated herein by reference.

(b) The combination of Hagen et al. and Knappe et al. does not show or suggest all of the claim language of claim 4.

The combination of Hagen et al. and Knappe et al. does not illustrate a method that includes programming a hearing aid system through a mobile device using at least one mobile wireless communication protocol and receiving a distributed application in the mobile device from a programming fitting server through at least one long-range network using the at least one

mobile wireless communication protocol and using the distributed application to program a hearing aid in the hearing aid system, as recited in claim 4.

Claim 4 recites a method comprising programming a hearing aid system through a mobile device using at least one mobile wireless communication protocol, including receiving a distributed application in the mobile device from a programming fitting server through at least one long range network using the mobile wireless communication protocol, and using the distributed application to program a hearing aid. These features are not suggested by Hagen et al. and Knappe et al., either alone or in combination. Further, it would be improper to take official notice of the missing features as they are not supported by a clear and unmistakable technical line of reasoning. Thus, a *prima facie* case of obviousness has not been established.

Hagen et al. do not show or suggest distributed applications. In claim 4, the mobile device receives a distributed application from the programming fitting server, and the distributed application is used to program the hearing aid. Contrary to the opinion expressed by the Examiner on page 4, paragraph 2 of the final Office Action, the hearing aid programs downloaded from the host 236 via PCMCIA card 300 and cable 314 into portable multiprogram unit 320 of Hagen et al. do not constitute distributed applications. Initially, the programs are stored in the host 236 (see e.g. col. 13, lines 15 and 16). The portable multiprogram unit 320 is temporarily connected to host 236 using a cable 314 so that one or more of the programs can be downloaded into the portable multiprogram unit 320, which is subsequently disconnected from the host 236. Such programs cannot be regarded as distributed applications.

(c) Dependent Claim

Claim 5 depends on independent claim 4, and is believed to be condition for allowance at least for the reasons provided with respect to claim 4.

B)(3) Independent Claim 66

(a) There is no teaching or motivation to combine the references.

In combining Knappe et al. with Hagen et al., the office erroneously took the isolated feature of a communication link between a cellular telephone and a base station in Knappe et al. out of context. Specific arguments in support of Appellant's position that the combination of references is improper were provided with respect to claim 1. In the interest of brevity, the reasons provided with respect to claim 1 are incorporated herein by reference.

(b) The combination of Hagen et al. and Knappe et al. does not show or suggest all of the claim language of claim 66.

The combination of Hagen et al. and Knappe et al. does not illustrate a system that comprises a programming fitting server adapted to store a distributed application and a terminal adapted to program the hearing aid where the terminal is adapted to communicate using a wireless communication protocol to receive the distributed application from the server from a long-range network, and is adapted to use the distributed application to interact with the hearing aid, as recited in claim 66.

Claim 66 recites a system that comprises a programming fitting server adapted to store a distributed application and a terminal adapted to program the hearing aid where the terminal is adapted to communicate using a wireless communication protocol to receive the distributed application from the server from a long-range network. These features are not suggested by Hagen et al. and Knappe et al., either alone or in combination. Further, it would be improper to take official notice of the missing features as they are not supported by a clear and unmistakable technical line of reasoning. Thus, a *prima facie* case of obviousness has not been established.

Hagen et al. do not show or suggest distributed applications. In claim 66, the terminal receives a distributed application from the programming fitting server, which distributed application is used to program or interact with the hearing aid. Contrary to the opinion expressed by the Examiner on page 4, paragraph 2 of the final Office Action, the hearing aid programs downloaded from the host 236 via PCMCIA card 300 and cable 314 into portable multiprogram unit 320 of Hagen et al. do not constitute distributed applications. The programs are stored in the

host 236 (see e.g. col. 13, lines 15 and 16). The portable multiprogram unit 320 is temporarily connected to host 236 using the cable 314 so that one or more of the programs can be downloaded into the portable multiprogram unit 320, which is subsequently disconnected from the host 236. Such programs cannot be regarded as distributed applications.

(c) Dependent Claims

Claims 68 and 69 depend on claim 66, and are believed to be condition for allowance at least for the reasons provided with respect to independent claim 66.

At least for the reasons provided above, Appellant respectfully requests consideration and reversal of the rejection of claims 1-5, 66 and 68-69 under 35 U.S.C. § 103(a) as being unpatentable over Hagen et al. in view of Knappe et al..

C) Discussion of the rejection of claims 15-21, 24-26, 30, 32-33, 36, 47-53, 56-58, 64-65 and 94 under 35 U.S.C. § 103(a) as being unpatentable over Hagen et al. (U.S. Patent No. 6,424,722) in view of Anderson (U.S. Patent No. 5,721,783).

Claims 15-21, 24-26, 30, 32-33, 36, 47-53, 56-58, 64-65 and 94 were rejected under 35 USC § 103(a) as being unpatentable over Hagen et al. (US 6,424,722) in view of Anderson (U.S. Patent No. 5,721,783). This rejection was timely traversed.

C)(1) Independent Claim 15

(a) There is no teaching or motivation to combine the references.

Appellant respectfully asserts that the rejection fails to provide a proper motivation to combine Hagen et al. and Anderson. The rejection states: "Hagen does not teach that the communication between the mobile device and the programming fitting server uses a mobile wireless communication protocol." (Final Office Action dated June 2, 2006, at page 6 lines 4-5). The rejection further states: "Anderson teaches a mobile device (RPU 16 with wireless link circuitry 19) receives programming (test program) using a mobile wireless communication protocol (secondary wireless link), alternative to wired link. Col. 27, lines 22-24." (Final Office Action dated June 2, 2006, at page 6 lines 6-8). This combination asserted by the Office is improper for at least the following reasons:

(i) Anderson teaches away from Hagen et al.

Hagen et al. program earpieces. In contrast, the RPU of Anderson is programmed, and is not used to program software in the earpiece (see e.g. col. 1, lines 63-65 and col. 2, lines 36-39). Therefore, Hagen et al. and Anderson each teach away from the disclosure of the other reference, so that the skilled person would not have contemplated or been motivated to combine these references.

(ii) The RPU in Anderson and the multiprogram unit of Hagen et al. are not analogous.

Anderson loads, through the secondary wireless link, a hearing test program controlling the operation of the RPU during a hearing test into the RPU in order to temporarily store the hearing test program in the RPU for the duration of the hearing test (see col. 27, lines 17-24). This hearing test program is used to perform a hearing test and is unrelated to programming a hearing aid in general, and is unrelated to downloading hearing aid programs from a host through a wired connection into a multiprogram unit used for programming a hearing aid as particularly disclosed in Hagen et al..

There is no teaching or motivation to take the isolated feature of the RPU 16 out of the context of the disclosure of Anderson in order to combine it with Hagen et al.. As shown in FIG. 9 and described in e.g. col. 14, lines 3-5 of Hagen et al., the multiprogram unit 320 is temporarily connected to the PCMCIA card 300 via a cable 314, wherein the multiprogram unit 320 is located in the immediate vicinity of the PCMCIA card 300. The wired communication link between the multiprogram unit 320 and the PCMCIA card 300 provides for short range communication in the order of a few meters. By contrast, the secondary wireless link in Anderson is adapted for communication between the RPU and the general subscriber telephone network or voice paging services (see e.g. col. 2, lines 49-51). Since the latter communication is to be established and maintained by the RPU and the RPU is a device carried around by a person, the communication over the secondary wireless link has to be effective at least over significantly larger distances. A skilled person would not have contemplated or been motivated to replace the cable 314 of Hagen et al., adapted to connect a hand-held or laptop computer 236 (see e.g. col. 13, lines 16-19) to a multiprogram unit 320 disposed stationary and local to the computer 236, with a communication link adapted for long range communication. The objectives and characteristics of these communication links are very different from each other.

(b) The combination of Hagen et al. and Anderson does not show or suggest all of the claim language of claim 15.

The combination of Hagen et al. and Anderson does not illustrate a system that includes a mobile device adapted to use a mobile wireless communication protocol to communicate with the programming fitting server and to program software in the hearing aid, as recited in claim 15.

The wireless communication link in Hagen et al. is between a portable multiprogram unit 320 and hearing aids 344, 348 (see FIG. 9). The wireless link of Hagen et al. is identified as infrared, radio frequency, or ultrasound (col. 14 at lines 27-32). The portable multiprogram unit 320 is connected to a host 236 via a cable 314 and a PCMCIA card 300. This does not show a method that uses a mobile wireless communication protocol to communicate between a mobile device and a programming fitting server.

In Anderson, a microphone in the earpiece picks up audio signals, and these audio signals are transmitted to the remote processing unit (RPU) to enhance the signals (col. 1, lines 50-63). The audio enhancements are performed in the RPU rather than the earpiece. Only the RPU is programmed (see e.g. claims 28 and 45). The RPU is not used to program software in the earpiece. Further, Anderson does not disclose a programming fitting server.

Therefore, a combination of Hagen et al. and Anderson does not teach or suggest a mobile device adapted to use a mobile wireless communication protocol to communicate with the programming fitting server, and the mobile device adapted to program software in the hearing aid. Further, it would be improper to take official notice of the missing features as they are not supported by a clear and unmistakable technical line of reasoning. Thus, a *prima facie* case of obviousness has not been established.

(c) Dependent Claims

Claims 16-21, 24-26, 30 and 32-33 depend, either directly or indirectly, on claim 15, and are asserted to be in condition for allowance at least for the reasons provided with respect to claim 15.

C)(2) Independent Claim 36

(a) There is no teaching or motivation to combine the references.

There is no teaching or motivation to take the isolated feature of the RPU 16 out of the context of the disclosure of Anderson in order to combine it with Hagen et al.. Specific arguments in support of Appellant's position that the combination of references is improper were provided with respect to claim 15. In the interest of brevity, the reasons provided with respect to claim 15 are incorporated herein by reference.

(b) The combination of Hagen et al. and Anderson does not show or suggest all of the claim language of claim 36.

The combination of Hagen et al. and Anderson does not illustrate a system that includes a mobile device adapted to use a mobile wireless communication protocol to receive a distributed application from a computer from a long-range network and use the distributed application to program the hearing aid, as recited in claim 36.

Claim 36 recites a system that comprises a system that includes a mobile device adapted to use a mobile wireless communication protocol to receive a distributed application from a computer from a long-range network and use the distributed application to program the hearing aid. These features are not suggested by Hagen et al. and Anderson, either alone or in combination. Further, it would be improper to take official notice of the missing features as they are not supported by a clear and unmistakable technical line of reasoning. Thus, a *prima facie* case of obviousness has not been established.

Hagen et al. does not show or suggest distributed applications. In Claim 36, the mobile device receives a distributed application from the programming fitting server, which distributed application is used to program the hearing aid. Contrary to the opinion expressed by the Examiner on page 8, paragraph 4 of the final Office Action, the hearing aid programs downloaded from the host 236 via PCMCIA card 300 and cable 314 into portable multiprogram unit 320 of Hagen et al. do not constitute distributed applications. The programs are stored in the host 236 (see e.g. col. 13, lines 15 and 16). The portable multiprogram unit 320 is temporarily connected to host 236 using the cable 314 so that one or more of the programs can be

downloaded into the portable multiprogram unit 320, which is subsequently disconnected from the host 236. Such programs cannot be regarded as distributed applications.

(c) Dependent Claim

Claim 94 is dependent on claim 36, and is asserted to be in condition for allowance at least for the reasons provided with respect to claim 36.

C)(3) Independent Claim 47

(a) There is no teaching or motivation to combine the references.

There is no teaching or motivation to take the isolated feature of the RPU 16 out of the context of the disclosure of Anderson in order to combine it with Hagen et al.. Specific arguments in support of Appellant's position that the combination of references is improper were provided with respect to claim 15. In the interest of brevity, the reasons provided with respect to claim 15 are incorporated herein by reference.

(b) The combination of Hagen et al. and Anderson does not show or suggest all of the claim language of claim 47.

The combination of Hagen et al. and Anderson does not illustrate a system that includes a terminal adapted to program software in the hearing aid, and to use at least one wireless communication protocol to communicate with a programming fitting server to program the software, as recited in claim 47. These features are not suggested by Hagen et al. and Anderson, either alone or in combination. Further, it would be improper to take official notice of the missing features as they are not supported by a clear and unmistakable technical line of reasoning. Thus, a *prima facie* case of obviousness has not been established.

(c) Dependent Claims

Claims 48-53, 56-58, 64-65 depend, either directly or indirectly, on claim 47, and are asserted to be in condition for allowance at least for the reasons provided with respect to claim 47.

Appellant respectfully requests consideration and reversal of the rejection of claims 15-21, 24-26, 30, 32-33, 36, 47-53, 56-58, 64-65 and 94 under 35 USC § 103(a) as being unpatentable over Hagen et al. (US 6,424,722) in view of Anderson (U.S. Patent No. 5,721,783).

D) Discussion of the rejection of claims 22-23 and 54-55 under 35 U.S.C. § 103(a) as being unpatentable over Hagen et al. (U.S. Patent No. 6,424,722) as modified by Anderson (U.S. Patent No. 5,721,783) as applied to claims 15 and 47 above, and further in view of Shennib (U.S. Patent No. 5,197,332).

Claims 22-23 and 54-55 were rejected under 35 USC § 103(a) as being unpatentable over Hagen et al. (US 6,424,722) as modified by Anderson (US 5,721,783) as applied to claims 15 and 47 above, and further in view of Shennib (US 5,197,332). This rejection was timely traversed.

The addition of Shennib does not address the deficiencies of the rejection with respect to Hagen et al. and Anderson, as identified above. Claims 22-23 depend indirectly on claim 15, and claims 54-55 depend indirectly on claim 47. These dependent claims are believed to be condition for allowance at least for the reasons provided with respect to their base claim.

Appellant respectfully requests consideration and reversal of the rejection of claims 22-23 and 54-55 under 35 USC § 103(a) as being unpatentable over Hagen et al. in view of Anderson and Shennib.

E) Discussion of the rejection of claims 27-29, 31-32 and 34-35 and 59-63 under 35 U.S.C. § 103(a) as being unpatentable over Hagen et al. (U.S. Patent No. 6,424,722) as modified by Anderson (U.S. Patent No. 5,721,783) as applied to claims 15 and 47 above, and further in view of Leppisaari et al. (U.S. Patent No. 6,717,925).

Claims 27-29, 31-32 and 34-35 and 59-63 were rejected under 35 USC § 103(a) as being unpatentable over Hagen et al. (US 6,424,722) as modified by Anderson (US 5,721,783) as applied to claims 15 and 47 above, and further in view of Leppisaari et al. (US 6,717,925). This rejection was timely traversed.

The addition of Leppisaari et al. does not address the deficiencies of the rejection with respect to Hagen et al. and Anderson, as identified above. Also, Appellant submits that the rejection does not provide a proper motivation to combine Leppisaari et al., which does not appear to address hearing aid systems, with either Hagen et al. or Anderson.

Claims 27-29, 31-32 and 34-35 depend directly or indirectly on claim 15, and claims 59-63 depend directly or indirectly on claim 47. These dependent claims are believed to be condition for allowance at least for the reasons provided with respect to their base claim.

At least for the reasons provided above, Appellant respectfully requests consideration and reversal of the rejection of claims 27-29, 31-32 and 34-35 and 59-63 under 35 USC § 103(a) as being unpatentable over Hagen et al. in view of Anderson and Leppisaari et al.

F) Discussion of the rejection of claims 37-40 under 35 U.S.C. § 103(a) as being unpatentable over Hagen et al. (U.S. Patent No. 6,424,722) as modified by Anderson (U.S. Patent No. 5,721,783) as applied to claim 36 above, and further in view of Szymansky (U.S. Patent No. 6,557,029).

Claims 37-40 were rejected under 35 USC § 103(a) as being unpatentable over Hagen et al. (US 6,424,722) as modified by Anderson (US 5,721,783) as applied to claim 36 above, and further in view of Szymansky (US 6,557,029). This rejection was timely traversed.

The addition of Szymansky does not address the deficiencies of the rejection with respect to Hagen et al. and Anderson, as identified above. Also, Appellant submits that the rejection does not provide a proper motivation to combine Szymansky, which does not appear to address hearing aid systems, with either Hagen et al. or Anderson.

Claims 37-40 depend directly or indirectly on claim 36. These dependent claims are believed to be condition for allowance at least for the reasons provided with respect to their base claim.

At least for the reasons provided above, Appellant respectfully requests consideration and reversal of the rejection of claims 37-40 under 35 USC § 103(a) as being unpatentable over Hagen et al. in view of Anderson and Szymansky.

G) Discussion of the rejection of claims 41 and 71 under 35 U.S.C. § 103(a) as being unpatentable over Hagen et al. (U.S. Patent No. 6,424,722) as modified by Anderson (U.S. Patent No. 5,721,783) as applied to claim 15-16 and 47-48 above, and further in view of Knappe et al. (U.S. Patent No. 6,061,431).

Claims 41 and 71 were rejected under 35 USC § 103(a) as being unpatentable over Hagen et al. (US 6,424,722) as modified by Anderson (US 5,721,783) as applied to claims 15-16 and 47-48 above, and further in view of Knappe et al. (US 6,061,431). This rejection was timely traversed.

The addition of Knappe et al. does not address the deficiencies of the rejection with respect to Hagen et al. and Anderson, as identified above. Claims 41 depends indirectly on claim 15 and claim 71 depends indirectly on claim 47. These dependent claims are believed to be condition for allowance at least for the reasons provided with respect to their base claim.

At least for the reasons provided above, Appellant respectfully requests consideration and reversal of the rejection of claims 41 and 71 under 35 USC § 103(a) as being unpatentable over Hagen et al. in view of Anderson and Knappe et al..

H) Discussion of the rejection of claims 43-46 under 35 U.S.C. § 103(a) as being unpatentable over Hagen et al. (U.S. Patent No. 6,424,722) as modified by Anderson (U.S. Patent No. 5,721,783) as applied to claim 15 and 24 above, and further in view of Fazio (U.S. Patent No. 6,590,986).

Claims 43-46 were rejected under 35 USC § 103(a) as being unpatentable over Hagen et al. (US 6,424,722) as modified by Anderson (US 5,721,783) as applied to claims 15 and 24 above, and further in view of Fazio (US 6,590,986). This rejection was timely traversed.

The addition of Fazio does not address the deficiencies of the rejection with respect to Hagen et al. and Anderson, as identified above. Claims 43-46 depend indirectly on claim 15. These dependent claims are believed to be condition for allowance at least for the reasons provided with respect to their base claim.

At least for the reasons provided above, Appellant respectfully requests consideration and reversal of the rejection of claims 43-46 under 35 USC § 103(a) as being unpatentable over Hagen et al. in view of Anderson and Fazio.

I) Discussion of the rejection of claims 42 and 72 under 35 U.S.C. § 103(a) as being unpatentable over Hagen et al. (U.S. Patent No. 6,424,722) and Anderson (U.S. Patent No. 5,721,783) as modified by Leppisaari et al. (U.S. Patent No. 6,717,925) as applied to claims 15 and 31 above, and further in view of Peters (U.S. Patent No. 6,601,093).

Claims 42 and 72 were rejected under 35 USC § 103(a) as being unpatentable over Hagen et al. (US 6,424,722) and Anderson (US 5,721,783) as modified by Leppisaari et al. (US 6,717,925) as applied to claims 15 and 31 above, and further in view of Peters (US 6,601,093). This rejection was timely traversed.

The addition of Peters does not address the deficiencies of the rejection with respect to Hagen et al. and Anderson and Leppisaari et al., as identified above. Also, Appellant submits that the rejection does not provide a proper motivation to combine Peters, which does not appear to address hearing aid systems, with either Hagen et al. or Anderson or Leppisaari et al.. Claim 42 depends indirectly on claim 15, and claim 72 depends indirectly on claim 47. These dependent claims are believed to be condition for allowance at least for the reasons provided with respect to their base claim.

At least for the reasons provided above, Appellant respectfully requests consideration and reversal of the rejection of claims 42 and 72 under 35 USC § 103(a) as being unpatentable over Hagen et al. in view of Anderson, Leppisaari et al. and Peters.

J) Discussion of the rejection of claims 67 and 70 under 35 U.S.C. § 103(a) as being unpatentable over Hagen et al. (U.S. Patent No. 6,424,722) as modified by Knappe et al. (U.S. Patent No. 6,061,431) as applied to claim 66 above, and further in view of Peters (U.S. Patent No. 6,601,093).

Claims 67 and 70 were rejected under 35 USC § 103(a) as being unpatentable over Hagen et al. (US 6,424,722) as modified by Knappe et al. (US 6,061,431) as applied to claim 66 above, and further in view of Peters (US 6,601,093). This rejection was timely traversed.

The addition of Peters does not address the deficiencies of the rejection with respect to Hagen et al. and Knappe et al., as identified above. Also, Appellant submits that the rejection does not provide a proper motivation to combine Peters, which does not appear to address

hearing aid systems, with either Hagen et al. or Knappe et al.. Claims 67 and 70 depend on claim 66. These dependent claims are believed to be condition for allowance at least for the reasons provided with respect to their base claim.

At least for the reasons provided above, Appellant respectfully requests consideration and reversal of the rejection of claims 67 and 70 under 35 USC § 103(a) as being unpatentable over Hagen et al. in view of Knappe et al. and Peters.

K) Discussion of the rejection of claims 93 and 95 under 35 U.S.C. § 103(a) as being unpatentable over Hagen et al. (U.S. Patent No. 6,424,722) as modified by Anderson (U.S. Patent No. 5,721,783) as applied to claim 36 above, and further in view of Peters (U.S. Patent No. 6,601,093).

Claims 93 and 95 were rejected under 35 USC § 103(a) as being unpatentable over Hagen et al. (US 6,424,722) as modified by Anderson (US 5,721,783) as applied to claim 36 above, and further in view of Peters (US 6,601,093). This rejection was timely traversed.

The addition of Peters does not address the deficiencies of the rejection with respect to Hagen et al. and Anderson, as identified above. Also, Appellant submits that the rejection does not provide a proper motivation to combine Peters, which does not appear to address hearing aid systems, with either Hagen et al. or Anderson. Claims 93 and 95 depend on claim 36. These dependent claims are believed to be condition for allowance at least for the reasons provided with respect to their base claim.

At least for the reasons provided above, Appellant respectfully requests consideration and reversal of the rejection of claims 93 and 95 under 35 USC § 103(a) as being unpatentable over Hagen et al. in view of Anderson and Peters.

8. SUMMARY

Appellant respectfully submits that for the reasons argued above, claims 1-5, 15-72 and 93-95 were not properly rejected under § 103(a) as being unpatentable over the cited art.

It is respectfully submitted that the cited art does not render the claims anticipated or obvious and that the claims are patentable over the cited art. Reversal of the rejection and allowance of the pending claims are respectfully requested.

Respectfully submitted,

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By their Representatives,

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Date 4-2-07 By 
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 2nd day of April 2007.

CANDIS BUENDING

Name

Signature



CLAIMS APPENDIX

1. A method comprising:
 - using a mobile wireless communication protocol to communicate between a mobile device and a programming fitting server; and
 - programming software in a hearing aid using the programming fitting server and the mobile device.
2. The method of claim 1, wherein programming software in a hearing aid includes upgrading software in the hearing aid.
3. The method of claim 1, wherein programming software in a hearing aid includes sending a distributed application from the server to the mobile device, the distributed application being adapted to interact with the hearing aid.
4. A method comprising:
 - programming a hearing aid system through a mobile device using at least one mobile wireless communication protocol, wherein programming the hearing aid system includes:
 - receiving a distributed application in the mobile device from a programming fitting server through at least one long-range network using the at least one mobile wireless communication protocol; and
 - using the distributed application to program a hearing aid in the hearing aid system.
5. The method of claim 4, wherein the programming includes programming the hearing aid using a programming module coupled to the hearing aid.
15. A system comprising:
 - a hearing aid system having a hearing aid;

a programming fitting server; and
a mobile device adapted to use a mobile wireless communication protocol to communicate with the programming fitting server and to program software in the hearing aid.

16. The system of claim 15, the server is adapted to transmit a distributed application to the mobile device, the distributed application being adapted to interact with the hearing aid.

17. The system of claim 16, further comprising at least one network to facilitate communications at least among the hearing aid system, the mobile device, and the server.

18. The system of claim 15, wherein the hearing aid system includes a hearing aid programming module.

19. The system of claim 15, wherein the hearing aid system is capable of audio signal processing.

20. The system of claim 15, wherein the hearing aid system includes a programming module adapted to communicate with the hearing aid, and wherein the programming module is adapted to communicate with the mobile device so as to receive at least one programming instruction from the mobile device to program the hearing aid.

21. The system of claim 20, wherein the programming module includes a headset.

22. The system of claim 20, wherein the hearing aid is capable of digital audio compression and decompression, and wherein the programming module is capable of digital audio compression and decompression.

23. The system of claim 20, wherein the programming module is capable of sending a test audio signal to the hearing aid so as to test at least one aural response of a patient.

24. The system of claim 15, wherein the mobile device includes a mobile device selected from a group consisting of a digital cellular telephone, a personal digital assistant, and a personal communication and information device.
25. The system of claim 24, wherein the mobile device is adapted to synchronize data with the server.
26. The system of claim 25, wherein the mobile device is adapted to receive an upgraded audiological software from the server.
27. The system of claim 15, wherein the mobile device is adapted to use a data service protocol selected from a group consisting of General Packet Radio Service (GPRS), High-Speed Circuit-Switched Data Service (HSCSD), Enhanced Data Rate for GSM Evolution (EDGE), Integrated Services Digital Network (ISDN), Universal Mobile Telecommunications System (UMTS), and Cellular Digital Packet Data (CDPD).
28. The system of claim 15, wherein the standard mobile wireless communication protocol includes a wireless communication protocol to operate on a long-range wireless network.
29. The system of claim 28, wherein the wireless communication protocol to operate on a long-range wireless network includes a protocol selected from a group consisting of Global System for Mobile Communications (GSM), Code Division Multiple Access-One (cdmaOne), Time Division Multiple Access (TDMA), PDC, JDC, Universal Mobile Telecommunications System (UMTS), Code Division Multiple Access-2000 (cdma2000), and Digital Enhanced Cordless Telephony (DECT).
30. The system of claim 15, wherein the mobile device is configured to communicate with the hearing system over a short-range network.

31. The system of claim 30, wherein the short-range network includes a short-range network selected from a group consisting of a radio communication network, an optical communication network, and a wired communication network.
32. The system of claim 31, wherein the optical communication network includes an optical communication network using Infrared Data Association (IrDA) protocol.
33. The system of claim 30, wherein the hearing aid system is adapted to communicate with the mobile device wirelessly through the short-range network.
34. The system of claim 17, wherein the server is adapted to couple to an Internet.
35. The system of claim 34, further comprising a gateway adapted to be coupled in a communication path between the mobile device and the server.
36. A system comprising:
a hearing aid system having a hearing aid;
a distributed application; and
a mobile device adapted to program the hearing aid, the mobile device adapted to use a mobile wireless communication protocol to receive the distributed application from a computer from a long-range network, the mobile device adapted to use the distributed application to program the hearing aid.
37. The system of claim 36, wherein the distributed application includes an applet.
38. The system of claim 37, wherein the applet is configured as a Java applet.
39. The system of claim 38, wherein the applet is adapted to receive information from the computer, and wherein the applet is adapted to transmit information to the computer.

40. The system of claim 38, wherein the mobile device includes a browser that is adapted to receive the applet to execute on the mobile device so as to interact with the hearing aid system.

41. The system of claim 16, wherein the server includes a database that includes patient data, and audiological data associated with at least one hearing aid system.

42. The system of claim 31, wherein the radio communication network includes a network selected from a group consisting of HomeRF, DECT, PHS, WLAN, and Bluetooth technology.

43. The system of claim 24, wherein the personal communication and information device includes a CompactFlash module that is adapted to communicate with the hearing aid system.

44. The system of claim 24, wherein the digital cellular phone includes a custom interface module that is adapted to communicate with the hearing aid system.

45. The system of claim 26, wherein the upgraded audiological software includes a piece of software to be executed on the mobile device.

46. The system of claim 26, wherein the upgraded audiological software includes a piece of software to be executed on the hearing aid.

47. A system comprising:

- a hearing aid system having a hearing aid; and

- a terminal adapted to program software in the hearing aid, the terminal adapted to use at least one wireless communication protocol to communicate with a programming fitting server to program the software.

48. The system of claim 47, further comprising the programming fitting server.

49. The system of claim 48, further comprising at least one network to facilitate communications at least among the hearing aid system, the terminal, and the server.

50. The system of claim 47, wherein the hearing aid system includes a hearing aid programming module.

51. The system of claim 47, wherein the hearing aid system is capable of audio signal processing.

52. The system of claim 47, wherein the hearing aid system includes a programming module adapted to communicate with the hearing aid, and wherein the programming module is adapted to communicate with the terminal so as to receive at least one programming instruction from the terminal to program the hearing aid.

53. The system of claim 52, wherein the programming module includes a headset that is capable of communicating ambient information.

54. The system of claim 52, wherein the hearing aid is capable of digital audio compression and decompression, and wherein the programming module is capable of digital audio compression and decompression.

55. The system of claim 52, wherein the programming module is capable of sending a test audio signal to the hearing aid so as to test at least one aural response of a patient.

56. The system of claim 47, wherein the terminal is a data terminal.

57. The system of claim 48, wherein the terminal is adapted to synchronize data with the server.

58. The system of claim 57, wherein the terminal is adapted to receive an upgraded audiological software from the server.

59. The system of claim 47, wherein the terminal is adapted to use a data service protocol selected from a group consisting of General Packet Radio Service (GPRS), High-Speed Circuit-Switched Data Service (HSCSD), Enhanced Data Rate for GSM Evolution (EDGE), Integrated Services Digital Network (ISDN), Universal Mobile Telecommunications System (UMTS), and Cellular Digital Packet Data (CDPD).

60. The system of claim 47, wherein the at least one standard wireless communication protocol includes a standard wireless communication protocol to operate on a long-range wireless network.

61. The system of claim 60, wherein the standard wireless communication protocol to operate on a long-range wireless network includes a protocol selected from a group consisting of Global System for Mobile Communications (GSM), Code Division Multiple Access-One (cdmaOne), Time Division Multiple Access (TDMA), PDC, JDC, Universal Mobile Telecommunications System (UMTS), Code Division Multiple Access-2000 (cdma2000), and Digital Enhanced Cordless Telephony (DECT).

62. The system of claim 47, wherein the terminal is configured to communicate with the hearing system over a short-range network.

63. The system of claim 62, wherein the short-range network includes a short-range network selected from a group consisting of a radio communication network, an optical communication network, and a wired communication network.

64. The system of claim 63, wherein the optical communication network includes an optical communication network using Infrared Data Association (IrDA) protocol.

65. The system of claim 62, wherein the hearing aid system is adapted to communicate with the terminal wirelessly through the short-range network.
66. A system comprising:
a hearing aid system having a hearing aid;
a programming fitting server adapted to store a distributed application; and
a terminal adapted to program the hearing aid, the terminal adapted to communicate using a wireless communication protocol to receive the distributed application from the server from a long-range network, the mobile device adapted to use the distributed application to interact with the hearing aid.
67. The system of claim 66, wherein the terminal is configured to communicate with the hearing aid system using Bluetooth wireless communication protocol.
68. The system of claim 66, wherein the terminal is adapted to communicate using a Wireless Access Protocol.
69. The system of claim 66, wherein the distributed application includes an object that is adapted to receive information from the server and adapted to transmit information to the server.
70. The system of claim 66, wherein the terminal is configured to communicate with the hearing aid system over a short-range network using a protocol associated with the short-range network.
71. The system of claim 48, wherein the server includes a database that includes patient data, and audiological data associated with at least one hearing aid system.
72. The system of claim 63, wherein the radio communication network includes a network implemented using Bluetooth technology.

93. The system of claim 36, wherein the mobile device is configured to communicate with the hearing aid system using Bluetooth wireless communication protocol.

94. The system of claim 36, wherein the mobile device is adapted to communicate using a Wireless Access Protocol.

95. The system of claim 36, wherein the mobile device is configured to communicate with the hearing aid system over a short-range network using a protocol associated with the short-range network.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.